



[7590-01-P]

## **NUCLEAR REGULATORY COMMISSION**

**[NRC-2018-0076]**

### **Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Draft regulatory guide; request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment Draft Regulatory Guide (DG), DG-1333, "Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems." DG-1333 is proposed Revision 2 of Regulatory Guide (RG) 1.180, "Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems," dated October 2003. This DG updates the guidance on electromagnetic compatibility (EMC) practices and test methods that the staff of the NRC consider acceptable for qualifying safety-related instrumentation and control (I&C) systems for the expected electromagnetic environment in nuclear power plants.

**DATES:** Submit comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only

for comments received on or before this date. Although a time limit is given, comments and suggestions in connection with items for inclusion in guides currently being developed or improvements in all published guides are encouraged at any time.

**ADDRESSES:** You may submit comments by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for NRC-2018-0076. Address questions about NRC dockets to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@nrc.gov. For technical questions, contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **Mail comments to:** May Ma, Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

**FOR FURTHER INFORMATION CONTACT:** David Dawood, telephone: 301-415-2389, e-mail: David.Dawood@nrc.gov and Michael Eudy, telephone: 301-415-6003, e-mail : Michael.Eudy@nrc.gov. Both are staff members of the Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

## **SUPPLEMENTARY INFORMATION:**

### **I. Obtaining Information and Submitting Comments**

#### **A. Obtaining Information**

Please refer to Docket ID NRC-2018-0076 when contacting the NRC about the availability of information regarding this action. You may obtain publically-available information related to this action, by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for DG-1333 or Docket ID NRC-2018-0076.
- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). This DG is electronically available in ADAMS under Accession No. ML16281A531. The regulatory analysis for this DG is available in ADAMS under Accession No. ML17188A397.
- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

## B. Submitting Comments

Please include Docket ID NRC-2018-0076 in your comment submission. The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC posts all comment submissions at <http://www.regulations.gov> as well as enters the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

## II. Additional Information

The NRC is issuing for public comment a DG in the NRC's "Regulatory Guide" series. This series was developed to describe and make available to the public information regarding methods that are acceptable to the NRC staff for implementing specific parts of the NRC's regulations, techniques that the staff uses in evaluating specific issues or postulated events, and data that the staff needs in its review of applications for permits and licenses.

The DG entitled "Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems," is proposed Revision 2 to RG 1.180. The proposed revised RG is temporarily identified by

its task number, DG-1333. The proposed revised RG updates the guidance on EMC practices and test methods that the staff of the NRC consider acceptable for qualifying safety-related I&C systems for the expected electromagnetic environment in nuclear power plants. The revised RG endorses the current versions of previously endorsed military, Institute of Electrical and Electronics Engineers (IEEE), and International Electrotechnical Commission (IEC) specifications and standards; incorporates additional guidance for evaluating the effects of electrostatic discharge; and accounts for the evolution of the operational environment at nuclear power plants arising from the increased use of digital technology, including wireless communication for both personnel (personal digital assistants and smartphones) and industrial (remote I&C) applications.

Department of Defense, Federal, National Aeronautics and Space Administration, NASA, Department of Energy, and Government specifications, standards, handbooks, and publications are available free from [www.EverySpec.com](http://www.EverySpec.com). Copies of IEEE documents may be purchased from the Institute of Electrical and Electronics Engineers Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855, or through the IEEE's public Web site at [http://www.ieee.org/publications\\_standards/index.html](http://www.ieee.org/publications_standards/index.html). Copies of IEC documents may be obtained through its Web site at <http://www.iec.ch/> or by writing the IEC Central Office at P.O. Box 131, 3 Rue de Varembe, 1211 Geneva, Switzerland, telephone +41 22 919 02 11.

### **III. Backfitting and Issue Finality**

This DG-1333, if finalized as Revision 2 to RG 1.180, would update the guidance on EMC practices and test methods that the staff of the NRC consider acceptable for

qualifying safety-related I&C systems for the expected electromagnetic environment in nuclear power plants. The DG, if finalized, would not constitute backfitting as defined in title 10 of the *Code of Federal Regulations* (10 CFR) section 50.109 (the Backfit Rule) and is not otherwise inconsistent with the issue finality provisions in 10 CFR part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants.” The subject of this DG, as described above, is an NRC-defined process that does not fall within the purview of subjects covered by either the Backfit Rule or the issue finality provision in 10 CFR part 52. Issuance of the DG, in final form, would not constitute backfitting, and no further consideration of backfitting is required in order to issue the draft or final RG in final form.

Dated at Rockville, Maryland, this 18<sup>th</sup> day of April, 2018.

For the Nuclear Regulatory Commission.

Thomas H. Boyce, Chief,  
Regulatory Guidance and Generic  
Issues Branch,  
Division of Engineering,  
Office of Nuclear Regulatory Research.

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